CLASSIFICATION OF MATTER

Read p 138 - 143 in the Pearson textbook and answer the following questions:

1.a) Define matter.

b) Give an example of a substance that has two states of matter in the same material.

2. Use the Particle Theory of Matter to explain what happens when water changes to ice.

3. Write definitions for the following terms:

a) Mechanical mixture

b) suspension

c) solution

4. How could you speed up the particles that make up the silver in a fork?

5. What kind of mixture is air? Explain your choice.

4. Is perfume a pure substance, a solution or a heterogeneous mixture? Explain your answer.

Classifying Substances by Composition

**Classify each of the following substances as an element, a compound, a homogeneous mixture or a heterogeneous mixture. In each case, give the reason for your choice.**

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| --- | --- | --- | --- |
| **Substance** | **Description** | **Classification** | **Reason** |
| Air | Clear, colourless gas with a single phase and has oxygen, nitrogen and carbon dioxide as well as other gases |  |  |
| Sugar | Small, white crystals composed of carbon, hydrogen and oxygen |  |  |
| Fertilizer | Small solid granules of varying colours |  |  |
| Sulphur | Yellow powder that melts at 113° C |  |  |
| Bluestone | Blue crystals of CuSO4 |  |  |
| Tea | Clear yellow-brown liquid |  |  |
| Granite rock | Black and white speckled solid |  |  |
| Baking soda | White powder of NaHCO3 that cannot be separated by physical means |  |  |
| Steel wool | Long strands of a shiny grey solid metal made of iron and carbon |  |  |
| Milk | White opaque liquid |  |  |
| Copper | Shiny red-brown solid that melts at 1083° C |  |  |
| Sodium hydroxide | White flakes that contain 57.5% sodium, 40.0 % oxygen, and 2.5% hydrogen |  |  |
| Oxygen | Clear colourless gas |  |  |
| Plastic wrap | Clear colourless solid that burns when heated |  |  |
| Ketchup | Thick red, opaque liquid |  |  |